

IN THE CLAIMS

Please amend the claims as follows:

1. (CURRENTLY AMENDED) A vehicle occupant sensing system for detecting a condition of a vehicle seat, said vehicle occupant sensing system comprising:

a circuit carrier with an upper surface;

an electric circuit supported by said circuit carrier, said electric circuit presenting a plurality of leads;

at least one low profile sensor assembly having a housing that includes a fixed base, an upper slide member, and at least one intermediate guide member disposed between said upper slide member and said base, said upper slide member and said at least one intermediate guide member supported for movement toward and away from said fixed base in response to movement of said vehicle seat;

a sensor adapted to detect the condition of the vehicle seat, said sensor having a body with a bottom surface that is supported by said upper surface of said circuit carrier, and having a plurality of formed terminals corresponding to said plurality of leads presented by said electric circuit, wherein each of said plurality of formed terminals is spaced a predetermined distance away from a plane defined by said bottom surface of said body; and

a plurality of conductive connectors associated with said corresponding plurality of formed terminals and leads, said conductive connectors operatively supporting said terminals and establishing electrical communication between said terminals and said leads.

2. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 1, wherein said conductive connectors each include at least one deformable blade extending into said circuit carrier and into electrical communication with the associated lead of said electric circuit.

3. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 2, wherein said at least one deformable blade includes a first portion, a second portion and a third portion, and wherein said first portion extends into and through said circuit carrier and into electrical communication with the associated lead of said electric circuit, and said second portion is bent such that said third portion extends into said circuit carrier and into electrical communication with the associated lead of said electric circuit.

4. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 1, wherein said conductive connectors each include a body supported on said upper surface of said circuit carrier and a top end spaced away from said upper surface of said circuit carrier, wherein said lower portions of said formed terminals are each supported by said top end of corresponding ones of said conductive connectors.

5. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 1, wherein said leads of said electric circuit have a Y-axis spacing, and wherein said formed terminals have a predetermined Y-axis spacing corresponding to said Y-axis spacing of said leads of said electric circuit.

6. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 1, wherein said sensor has a plurality of outer formed terminals which have a Y-axis bend, wherein said Y-axis bend is formed at a predetermined location relative to said body of said sensor.

7. (CURRENTLY AMENDED) A method of assembling a vehicle occupant sensing system for detecting a condition of a vehicle seat, the vehicle occupant sensing system comprising:

a circuit carrier with an upper surface;

an electric circuit supported by said circuit carrier, said electric circuit presenting a plurality of leads;

at least one low profile sensor assembly having a housing that includes a fixed base, an upper slide member, and at least one intermediate guide member disposed between said upper slide member and said base, said upper slide member and said at least one intermediate guide member supported for movement toward and away from said fixed base in response to movement of said vehicle seat;

a sensor adapted to detect the condition of the vehicle seat, said sensor having a body with a bottom surface and having a plurality of terminals corresponding to said plurality of leads presented by said electric circuit; and

a plurality of conductive connectors associated with said corresponding plurality of terminals and leads;

wherein said method of assembly comprises the steps of:

a) forming said terminals until spaced a predetermined distance away from a plane defined by said bottom surface of said body;

- b) electrically attaching said conductive connectors to corresponding ones of said leads;
- and
- c) electrically attaching said terminals to corresponding ones of said conductive connectors.

8. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 7, wherein step (b) involves extending at least one deformable blade formed on said conductive connector into said circuit carrier and into electrical communication with the associated lead of said electric circuit.

9. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 8, wherein step (b) comprises the steps of:

- 1) extending a first portion of said at least one blade into and through said circuit carrier and into electrical communication with the associated lead of said electric circuit;
- 2) bending a second portion of said at least one blade; and
- 3) extending a third portion of said at least one blade into said circuit carrier and into electrical communication with the associated lead of said electric circuit.

10. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 7, wherein step (c) involves supporting a body of said conductive connector on said upper surface of said circuit carrier such that a top end of said conductive connector is spaced away from said upper surface of said circuit carrier, and operatively supporting said terminals on said top end of corresponding ones of said conductive connectors.

11. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 7, wherein step (a) further involves forming said terminals to have a predetermined Y-axis spacing corresponding to a Y-axis spacing of said leads of said electric circuit.

12. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 7, wherein step (a) further involves forming a Y-axis bend in said terminal at a predetermined location relative to said body of said sensor.

13. (CURRENTLY AMENDED) A method of assembling a vehicle occupant sensing system for detecting a condition of a vehicle seat, the vehicle occupant sensing system comprising:

a circuit carrier with an upper surface;

an electric circuit supported by said circuit carrier, said electric circuit presenting a plurality of leads;

at least one low profile sensor assembly having a housing that includes a fixed base, an upper slide member, and at least one intermediate guide member disposed between said upper slide member and said base, said upper slide member and said at least one intermediate guide member supported for movement toward and away from said fixed base in response to movement of said vehicle seat;

a sensor adapted to detect the condition of the vehicle seat, said sensor having a body with a bottom surface and having a plurality of terminals corresponding to said plurality of leads presented by said electric circuit; and

a plurality of conductive connectors associated with said corresponding plurality of terminals and leads;

wherein said method of assembly comprises the steps of:

- a) forming said terminals until spaced a predetermined distance away from a plane defined by said bottom surface of said body;
- b) electrically attaching said terminals to corresponding ones of said conductive connectors; and
- c) electrically attaching said conductive connectors to corresponding ones of said leads.

14. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 13, wherein step (c) involves extending at least one deformable blade formed on said conductive connector into said circuit carrier and into electrical communication with the associated lead of said electric circuit.

15. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 14, wherein step (c) comprises the steps of:

- 1) extending a first portion of said at least one blade into and through said circuit carrier and into electrical communication with the associated lead of said electric circuit;
- 2) bending a second portion of said at least one blade; and
- 3) extending a third portion of said at least one blade into said circuit carrier and into electrical communication with the associated lead of said electric circuit.

16. (ORIGINAL) A vehicle occupant sensing system as set forth in claim 13, wherein step (b) involves supporting a body of said conductive connectors on said upper surface of said circuit carrier such that a top end of said conductive connector is spaced away from said upper surface of said circuit carrier, and operatively supporting said terminals on said top end of corresponding ones of said conductive connectors.

17. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 13, wherein said step (a) further involves forming said terminals to have a predetermined Y-axis spacing corresponding to a Y-axis spacing of said leads of said electric circuit.

18. (ORIGINAL) A method of assembling a vehicle occupant sensing system as set forth in claim 13, wherein said step (a) further involves forming a Y-axis bend in said terminals at a predetermined location relative to said body of said sensor.